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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,080	12/21/2001	Slim S. Souissi	270/052	1071

27433 7590 12/13/2005

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EXAMINER	
PATHAK, SUDHANSHU C	

ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/028,080	SOUISSI ET AL.	
	Examiner	Art Unit	
	Sudhanshu C. Pathak	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *September 23rd, 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35,40-49 and 54-61* is/are rejected.

7)☒ Claim(s) *36-39 and 50-53* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *December 21st, 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *April 28th, 2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-to-61 are pending in the application.

Response to Arguments

2. Applicant's arguments filed on September 23rd, 2005 have been fully considered but they are not persuasive.

3. In regards to the arguments presented that a 35 U.S.C. 102(e) establishes as Prior Art reference to be filed **by another**.

   The MPEP in (Sec. 706.02(a) "Rejections under 35 U.S.C. 102(a), (b), or (e); Printed Publication or Patent"; II. DETERMINING WHETHER TO APPLY 35 U.S.C. 102(a), (b), or (e)) states:

   In order to apply a reference under 35 U.S.C. 102(e), the **inventive entity** of the application **must be different** than that of the reference. Note that, where there are joint inventors, **only one inventor needs to be different** for the inventive entities to be different and a rejection under 35 U.S.C. 102(e) is applicable even if there are some inventors in common between the application and the reference.

4. In regards to the arguments presented regarding 35 U.S.C. 112, first paragraph the arguments were persuasive and the rejection has been withdrawn.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

   A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-11, 14, 17-31 & 56-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Souissi (6,785,556).

Regarding to Claim 1, 14, Souissi discloses a multimode modem (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Fig. 9-10) comprising a first device configured to communicate with a first communication system (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10); a second device configured to communicate with a second communication system (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10); a processor communicatively coupled with at least one of the first and second devices (Abstract, lines 1-3 & Fig. 1, elements 113, 120, 121 & Fig. 2a, elements 210, 285 & Fig. 11 & Column 1, lines 18-25, 58-65 & Column 2, lines 37-57 & Column 4, lines 25-35; and a control function configured to place the device in one of the following communication modes (Fig. 1, elements 113, 125, 121 & Fig. 2a, elements 205, 210, 285 & Fig. 2b, element 235 & Fig. 6 & Fig. 11): communication with the first communication system, communication with the second communication system, simultaneous communication with both the first and second communication systems, or gateway communication between the first and second communication systems (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 4,

element 410 & Fig. 5, element 510 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10 & Fig. 7 & Fig. 8 & Column 6, lines 53-67 & Column 7, lines 1-42). Souissi also discloses a host device comprising a processor (Fig. 1, element 121 & Fig. 2, element 215).

Regarding to Claim 2 & 17, Souissi discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes as described above. Souissi also discloses the processor comprising the control function (Fig. 1, elements 113, 125, 121 & Fig. 2a, elements 205, 210, 285 & Fig. 2b, element 285, 235 & Fig. 6 & Fig. 11 & Column 6, lines 53-67 & Column 7, lines 1-15 & Fig. 3, elements 320-340).

Regarding to Claims 3, 5, 21 & 25, Souissi discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes as described above. Souissi also discloses the first and second devices comprising a RF section and a baseband section, wherein the base band section comprises the control function (Fig. 1, element 110, 115, 111, 113 & Fig. 2a, elements 285, 260, 215, 205 & Fig. 2b, elements 235, 262, 263, 285 & Fig. 3, elements 360, 320-340 & Fig. 6).

Regarding to Claims 4, 6, 22 & 26, Souissi discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes wherein the first and second devices further comprise a RF section and a baseband section as described above. Souissi also discloses a communication interface between the first and second device wherein the interface allows the control function to enable the second device (Fig. 1, element 125 & Fig. 2a, elements 205, 285, 215 & Fig. 3, elements 320-340 & Fig. 6 & Column 4, lines 50-60 & Column 5, lines 50-60 & Column 6, lines 3-24).

Regarding to Claim 7-11, 18-20, 23-24, 27-28, 30-31 & 56-61, Souissi discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes as described above. Souissi also discloses scanning a predetermined plurality of modem modes of operation to determine one or more modes of operation that satisfy a predetermined criterion (Column 3, lines 3-15 & Column 6, lines 3-24 & Fig. 4, elements 420). Souissi also discloses scanning if the communication with the specified communication system is not available (Fig. 7, elements 720). Souissi also discloses scanning for another communication system coverage for a predetermined time period (Fig. 5, elements 560, 570 & Column 6, lines 36-46).

Regarding to Claim 29, Souissi discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes as described above. Souissi also discloses implementing the control function on an interface chip (Column 1, lines 57-67 & Fig. 3, element 315).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 12, 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi (6,785,556) in view of Jalloul et al. (PG-PUB 2004/0157609).

Regarding to Claims 12 & 15, Souissi discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes after querying the availability of the communication system as described above. However, Souissi does not disclose configuring the modem devices to engage in simultaneous communication between two different communications systems.

Jalloul discloses a method and apparatus to provide for soft handoff operation of a signal transmitted from a first communication standard and also a signal transmitted from a second communication standard (Abstract, lines 1-5 & Claim 1). Jalloul also discloses implementing the apparatus in mobile stations operating in a multi-mode standards (Specification, Page 1, Paragraph 5). Jalloul also discloses soft handoff includes the mobile station to receive and combine from multiple base stations operating at different standards simultaneously (Specification, Page 1, Paragraphs 6-7). Jalloul also discloses the mobile station compares the carrier to interference ratio to a threshold and initiates the handoff with the second base station according to the second communication standard (Specification, Page 2, Paragraph 14). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Jalloul teaches a process of simultaneous communication of a device with signals of multiple standards and this can be implemented in the system as described in Souissi so as to provide uninterruptible connectivity between the user device to the network while switching the communications systems to further improve the quality of the received signals and in improving the quality of the demodulation and decoding of the received data.

9. Claims 32-35 & 40-42, 48-49 & 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi (6,785,556) in view of Loh et al. (6,282,086).

Regarding to Claims 32-35, 40-42, 48-49 & 54-55, Souissi discloses a multimode modem (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Fig. 9-10) comprising a first device configured to communicate with a first

communication system (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10); a second device configured to communicate with a second communication system (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10); a processor communicatively coupled with at least one of the first and second devices (Abstract, lines 1-3 & Fig. 1, elements 113, 120, 121 & Fig. 2a, elements 210, 285 & Fig. 11 & Column 1, lines 18-25, 58-65 & Column 2, lines 37-57 & Column 4, lines 25-35; and a control function configured to place the device in one of the following communication modes (Fig. 1, elements 113, 125, 121 & Fig. 2a, elements 205, 210, 285 & Fig. 2b, element 235 & Fig. 6 & Fig. 11): communication with the first communication system, communication with the second communication system, simultaneous communication with both the first and second communication systems, or gateway communication between the first and second communication systems (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 4, element 410 & Fig. 5, element 510 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10 & Fig. 7 & Fig. 8 & Column 6, lines 53-67 & Column 7, lines 1-42). Souissi also discloses a host device comprising a processor (Fig. 1, element 121 & Fig. 2, element 215). However, Souissi does not disclose the modem implemented in a modem card comprising a standard form factor and a secondary modem card comprising a smaller form factor.

Loh discloses a card device receptacles arrangement of a first receptacle and a second receptacle for separately receiving a card device in a portable computer (Abstract, lines 1-9 & Fig. 1 & Fig. 4-5 & Fig. 11-12 & Column 2, lines 5-18). Loh also discloses the receptacle for receiving the second card is small than the receptacle for the first card (Column 2, lines 21-42). Loh also discloses the card receptacle conforms to the PCMCIA format (Column 3, lines 30-45). Loh also discloses the secondary card may provide auxiliary or additional features to the computer as provided by the primary card (Column 3, lines 65-67 & Column 4, lines 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Loh teaches a card device receptacle that includes the ability to add an additional secondary card and the modem as described in Souissi can be implemented in the card/receptacle so as to increase the functionality of the computer while maintaining the standard form factor of the device and without increasing the size of the computer or user device.

10. Claims 43 & 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi (6,785,556) in view of Loh et al. (6,282,086) in further view of Jalloul et al. (PG-PUB 2004/0157609).

Regarding to Claims 43 & 45, Souissi in view of Loh discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes and wherein the secondary modem card has a

smaller form factor than the secondary modem card as described above. However, Souissi does not disclose configuring the modem devices to engage in simultaneous communication between two different communications systems.

Jalloul discloses a method and apparatus to provide for soft handoff operation of a signal transmitted from a first communication standard and also a signal transmitted from a second communication standard (Abstract, lines 1-5 & Claim 1). Jalloul also discloses implementing the apparatus in mobile stations operating in a multi-mode standards (Specification, Page 1, Paragraph 5). Jalloul also discloses soft handoff includes the mobile station to receive and combine from multiple base stations operating at different standards simultaneously (Specification, Page 1, Paragraphs 6-7). Jalloul also discloses the mobile station compares the carrier to interference ratio to a threshold and initiates the handoff with the second base station according to the second communication standard (Specification, Page 2, Paragraph 14). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Jalloul teaches a process of simultaneous communication of a device with signals of multiple standards and this can be implemented in the system as described in Souissi so as to provide uninterruptible connectivity between the user device to the network while switching the communications systems to further improve the quality of the received signals and in improving the quality of the demodulation and decoding of the received data.

Regarding to Claim 45, Souissi in view of Loh in further view of Jalloul discloses a multi-mode modem comprising a first device configured to communicate with a first

system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes including simultaneous communication with both the communication systems and wherein the secondary modem card has a smaller form factor than the secondary modem card as described above. Souissi further discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes as described above. Souissi also discloses the processor comprising the control function (Fig. 1, elements 113, 125, 121 & Fig. 2a, elements 205, 210, 285 & Fig. 2b, element 285, 235 & Fig. 6 & Fig. 11 & Column 6, lines 53-67 & Column 7, lines 1-15 & Fig. 3, elements 320-340).

Regarding to Claims 46-47, Souissi in view of Loh in further view of Jalloul discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes including simultaneous communication with both the communication systems and wherein the secondary modem card has a smaller form factor than the secondary modem card as described above. Souissi further discloses a multi-mode modem comprising a first device configured to communicate with a first system, a second device configured to

communicate with a second system, a processor coupled to the first and second devices, and a control function configured to place the device into multiple modes as described above. Souissi also discloses scanning a predetermined plurality of modem modes of operation to determine one or more modes of operation that satisfy a predetermined criterion (Column 3, lines 3-15 & Column 6, lines 3-24 & Fig. 4, elements 420). Souissi also discloses scanning if the communication with the specified communication system is not available (Fig. 7, elements 720). Souissi also discloses scanning for another communication system coverage for a predetermined time period (Fig. 5, elements 560, 570 & Column 6, lines 36-46).

Allowable Subject Matter

11. Claims 36-39 & 50-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak

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